KRAL, V.

PHASE I BOOK EXPLOITATION Z/6284

Jerie, Jan, ed., Engineer, Doctor, Corresponding Member of the Czechoslovak Academy of Sciences

Základní problémy ve stavbě spalovacích turbin (Basic Problems in the Construction of Gas Turbines [collection of articles]). Prague, Nakl. ČAV, 1962. 627 p. 1600 copies printed.

Sponsoring Agency: Československá akademie věd.

Ed. of Publishing House: Marie Moravcová; Tech. Ed.: František Končický.

PURPOSE: The book is intended to familiarize turbine designers with recent developments in the design of gas turbines and to present some research results which may be helpful in designing more efficient turbines.

COVERAGE: The book comprises articles by leading Czechoslovak turbine experts on thermodynamic cycles, flow research in turbine components,

Card 1/8

Z/6284

Basic Problems in the Construction (Cont.)

burning of fuel in combustion chambers, axial compressors, and characteristics of turbines manufactured in Czechoslovakia.

TABLE OF CONTENTS:

Card 2/8

Z/6284

Basic Problems in the Construction (Cont.)

Card 4/8

Z/6284

Basic Problems in the Construction (Cont.)

Card 5/8

Basic Problems in the Construction (Cont.) Z/6284

Card 6/8

Basic Problems in the Construction (Cont.) Z/6284

Card 7/8

Basic Problems in the Construction (Cont.) Z/6284

AVAILABLE: Library of Congress

SUBJECT: Aerospace

AD/jsj/jk
3/21/63

Card 8/8

KRAL, V.

"Lakes on the Northern Slope of the Liptov Tatra Mountains", P. 1, (KARTOGRAFICKY PREHLED, Vol. 7(i. e. 8), No. 1, Mar. 1954, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

FRAL, V.

"The Research Institute of Forest Ecology Helps to Educate Cadres of Experts", P. 37, (LES, Vol. 1, No. 1, January 1954, Bratislava, Czech.)

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 4, No. 3, March 1955, Uncl.

CZECHOSLOVAKIA/Plant Diseases - Diseases of Forest Species. C-2

Abs Jour : Ref Zhur - Biol., No 7, 1958, 30192

Author : Kral, Viktor
Inst :
Title : Treating Forest Tree Seeds Against Fungi.

Orig Pub : Les, 1956, No 6, 250-252.

Abstract : Tests to treat spruce and pine seeds in order to ward off Fusarium, Botrytis cinerea, Alternaria tennis, etc. are described which were made in Czechoslovakia. The preparation "agronal" was used. The techniques are described.

Card 1/1

KRAL, Viktor, inz.

The activities of Forest Seed Research Station in Liptovsky Hradok. Vestnik CSAZV 9 no.3:163-165 '62.

1. Vyskumna stanica lesneho semenarstva, Pobocka Ceskoslovenskej akademie polnohospodarskych vied, Liptovsky Hradok.

KRAL, Viktor, inz.

Results of the analyses of stored disinfected seed of Norway spruce (Picea excelsa Link). Les cas 9 no.7:635-648 Jl'63.

1. Vyskumny ustav lesneho hospidarstva, Banska Stiavnica, Semenarska stanica Liptovsky Hradok.

KRAL, V.; BLUMLOVA, J.; SULA, J.

Separation of aromatic hydrocarbons by column chromatography on acetyl cellulose with regard to the detection and determination of 3,4-benzopyrene. Chem listy 58 no.12:1442-1451 D '64.

1. No.2. Institute of Medical Chemistry of the Faculty of General Medicine of Charles University, Prague.

KRAL V. Ze sanatoria pro nemoci nervove a dusevni v Praze, Veleslavine. O leceni migreny dihydroergotaminem-Sandoz Treatment of migraine with dihydroergotamine*Sandoz Prakticky lekar, Prague 1948, 21 (469-472)

The action of dihydroergotamine (DHE) on the migrainous attack is discussed. According to the clinical experiences, the drug acts not only in the second (vasodilatory) phase but also in the first (vasoconstrictory) phase. It therefore seems safe to assume that the beneficial effect of DHE is not due to vasoconstriciton which could not be proved clinically with intramuscular, subcutaneous or oral application but rather to its sympathicolytic action, exerted centrally on the vegetative regulation of the cerebral vessels.

Kral-Montreal

So: Neurology & Psychiatry Section VIII Vol.4, No. 1-6

KRAL, VLADIMIV, MUDr

KRAL, Vladimiv, MUDr

Lumbar anesthesia in cesarean section. Cesk. gyn. 19 no.4:269-274 July 54.

1. Por. gyn. odd. KUNZ v Gottwaldowie.
(ANESTHESIA, SPINAL
lumbar, in cesarean section)
(CESAREAN SECTION, anesthesia and analgesia
lumbar anesth.)

KRAL, Vladimir, Ing. arch.

Types of medical establishments. Cesk. nemoc. 22 no.3-4:56-65 My '54.

1. CTU, Stavoprojekt, Praha.
(HOSPITALS,
*floor plans)

MESTAN, J. F., MUDr.; KRAL, V., MUDr.; HORNI, J., MUDr.

Meteorological effects on myocardial infarct. Cas lek. cesk. 95 no.22:581-585 1 June 56.

1. Z interniho oddeleni KUNZ Karlovy Vary (prim. MUDr. J. Havranek).
(MYOCARDIAL INFARCT, physiology, metereol. aspects (Cz))
(CLIMATE, metereol. aspects of myocardial infarct (Cz))

KRAL, Vladimir, Primar MUDr.

Detection of female cancer in Gotwaldov Region. Cesk. gyn. 22/36 no.1-2:116-119 Feb 57.

1. KUNZ Gottwaldov.
(NEOPLASMS, diag.
mass detection of female cancer in Czechoslovakia (Cz))
(GYNECOLOGICAL DISEASES, diag.
mass detection in Czechoslovakia (Cz))

HAVRANEK, J.; KRAL, V.

Coronary diseases of the heart and diseases of the gallbladder and bile. Cas.lek.cesk 100 no.2:47-55 13 Ja '61.

1. Vnitrni oddeleni krajske nemocnice v Karlovych Varech, prednosta prim. MUDr. Josef Havranek.

(CORONARY DISEASE compl) (BILIARY TRACT dis)

L 29492-66

ACC NR: AP6020028 SOURCE CODE: CZ/0079/65/007/003/0320/0321

AUTHOR: Kral, V.

ORG: Institute of Labor Hygiene and Occupational Diseases, Prague (Ustav hygieny prace a chorob z povolani)

TITLE: Photoelectrical recording of motor activity

SOURCE: Activitas nervosa superior, v. 7, no. 3, 1965, 320-321

TOPIC TAGS: rat, behavior pattern, man, germanium diode, photoelectric effect, medical laboratory instrument

ABSTRACT: The recording of motor activity of experimental animals can be carried out successfully by the use of photoelectrical recorders. Chain motor reactions in rats were recorded by this method. It is possible to use the device even for experiments on humans. The author describes a new design of a recorder incorporating semiconductor elements, germanium resistance photodiode with a maximum sensitivity in the infrared region. Details of the construction of the apparatus are given. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 06, 09, 20 / SUBM DATE: none

Card 1/1 JS

L 29485-66

ACC NR: AP6020029 SOURCE CODE: CZ/0079/65/007/003/0321/0324

AUTHOR: Kral, V. (Prague) 37 B

ORG: Institute of Labor Hygiene and Occupational Diseases, Prague (Ustav hygieny prace a chorob z povolani)

TITLE: Universal electronic stop watch with automatic recording

SOURCE: Activitas nervosa superior, v. 7, no. 3, 1965, 321-324

TOPIC TAGS: pulse counter, pulse generator, transistorized circuit, integrated electronic device

ABSTRACT: The counter method of time measurements is discussed; it is based on counting the number of pulses produced at a definite frequency. The author designed and constructed an apparatus consisting of a source of pulses generated at a frequency of 1000 cycles, a pulse counter, transmitter and a recorder. The pulse generator is transistorized, producing square impulses. The pulse counter is of East German origin. The transmitter has three functions: it reads the counter at the end of the measured period, transforms this information into a 5-digit code, and actuates the recording of the value measured. It is of Czech manufacture. Orig. art. has: 1 figure and 1 formula. [JPRS]

SUB CODE: 09 / SUBM DATE: none / ORIG REF: 005 / OTH REF: 001
SOV REF: 001
Card 1/1 JS

KRAL, Ye.M.

KRAL, (fnu) (Capt. MD)

Coauthor, with Lt. Col. ONDRACEK (fnu), MD, and Capt. PALISA (fnu), MD, of article, "Epidemic of Czechoslovak Tick Encephalitis in Hradec Kralove Kraj in 1953," comparing clinical aspects of louping ill, Czechoslovak encephalitis, and Russian spring-summer encephalitis.
(VZL, Feb 55)

SO: Sum. 600, 1 Aug. 1955,

KRAL', Ye.M.

Result of studying the effectiveness of the dry living vaccine developed by the Institute of Epidemiology and Microbiology of the Academy of Medical Sciences of the U.S.S.R. for the prevention of brucellosis. Zhur.mikrobiol.epid. i immun. no.7:38-40 Jl '55. (MLRA 8:9)

1. Iz Krasnodarskoy krayevoy protivobrutsellezmoy stantsii (glavnyy vrach Ye.V.Strikhanova, nauchnyy rukovoditel' prof. B.P. Pervushin)

(BRUCELLOSIS, prevention and control,
vacc. in Russia, dry living vaccine
(VACCINES AND VACCINATION,
brucellosis dry living vaccine, effectiveness in Russia)

[illegible], J.

"Graphic control of the flow of liquid chlorine in collidious plants."

[illegible]. Praha, Czechoslovakia. Vol. 10, no. 3, Aug. 1955.

Monthly List of East European Accessions (EEAI), LC, Vol. [illegible], No. 6, Jun 59, Uncles

KRAL, Zdenek, inz., zastupujici docent

Laboratory preparation of handmade paper. Papir a celulosa 19 no.5:142-143 My '64.

1. Chair of Wood Chemical Technology, Higher School of Chemical Technology, Pardubice.

CHLADEK, Vl.; KRAL, Z.

Operations on the laryngeal cartilages after irradiation. Cesk. otolaryng. 13 no.1:34-40 F'64.

1. Otolaryngologicka klinika lekarske fakulty hygienicke KU v Praze (prednosta:prof.dr.Vl.Hlavacek, DrSc.) a Patologicko-anatomicky ustav fakultni nemocnice v Praze 10 (prednosta: doc. dr. J.Stolz)

NAHODIL, V.; HRDINA,R.; KRAL,Z.

Submucous lipoma of the duodenal bulb. Rozh. chir. 43 no.1: 44-46 Ja'64.

1. Chirurgicka klinika lekarske fakulty hygienicke KU v Praze (prednosta: prof. dr. E.Polak, DrSc.) ; Rentgenologicke oddeleni OUNZ v Praze 10 (vedouci: MUDr. V. Vinduska) a Ustav pro patologickou anatomii lekarske fakulty hygienicke KU v Praze (prednosta: doc.dr. J.Stolz).

*

L 13214-66 EWA(j)/T/EWA(b)-2 JK

ACC NR: AP6006102 SOURCE CODE: CZ/0053/65/014/004/0320/0321

AUTHOR: Waitzova, D.; Kyncl, F.; Kral, Z.; Smejkal, F. 33

ORG: Research Institute for Antibiotics, Roztoky (Vyzkumny ustav antibiotik) B

TITLE: Effect of changes in the acid-base balance on nephrotoxicity of neomycin [This paper was presented during the Twelfth Pharmacologic Days, Smolenice, 28 Jan 65.]

SOURCE: Ceskoslovenska fysiologie, v. 14, no. 4, 1965, 320-321

TOPIC TAGS: acid base equilibrium, rat, antibiotic, neomycin, pathology, toxicology, urology

ABSTRACT: Acidosis brought on by administration of ammonium chloride reduced urinary concentration of neomycin in rats to 367 units per ml, whereas in control rats and those given nothing but sodium carbonate ($NaHCO_3$), the concentration was 834 to 837 units per ml. Neither acidification or alkalization prevented the nephrotoxic histopathologic effect of this antibiotic. [JPRS]

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 004

jrn

Card 1/1

CERVENKA, Evzen, inz.; KRAL, Zdenek, zastupujici docent, inz.

Delignification of beechwood flour by nitric acid.
Papir a celulosa 18 no.9:181-184 S '63.

1. Katedra chemicke technologie dreva, Vysoka skola chemicko-technologicka, Pardubice.

FARA, Miroslav; KRAL, Zdenek

Unusual localization of desmoid of traumatic etiology. Cas.lek. cesk.99 no.30-31:968-971 22 Jl '60.

1. Klinika plasticke chirurgie, prednosta akademik F. Burian, a katedra patologicke anatomie, prednosta doc.dr. J.Stolz, hygienicke fakulty University Karlovy v Praze.
(FIBROMA case reports)
(MUSCLES neopl)

MALINSKY, L.; MALINSKA, K.; KRAL, Z.

The relation of cystic mastopathy to carcinoma of the breast.
Acta univ. carol. [med.] 7 no.5:647-653 '61.

1. Chirurgicka klinika lekarske fakulty hygienicke University Karlovy v Praze, prednosta prof. MUDr. Em. Polak Ustav patologicke anatomie lekarske fakulty hygienicke University Karlovy v Praze, prednosta doc. MUDr. J. Stolz.
(BREAST NEOPLASMS etiol) (MASTITIS compl)

JONAS, Vratislav; PECKA, Vladimir; KRAL, Zdenek

Clinical diagnosis of primary malignant tumor of the heart. Cas. lek. cesk. 101 no.29/30:927-934 20 Jl '62.

1. I klinika nemoci vnitrnich lekarske fakulty hygienicke KU v Praze, prednosta prof. dr. V. Jonas. Patologickoanatomicky ustav lekarske fakulty hygienicke KU v Praze, prednosta doc. dr. J. Stolz.

(HEART neoplasms) (SARCOMA diagn)
(RHABDOMYOSARCOMA diagn)

VOJTISEK, V.; PIHRT, J.; KRAL, Z.

Epistaxis as the principal symptom of a benign adenoma of the adrenal gland. Cas. lek. cesk. 101 no.37:1120-1124 14 S '62.

1. Chirurgicka klinika lekarske fakulty hygienicke KU v Praze 10, prednosta prof. dr. E. Polak. Otolaryngologicka klinika lekarske fakulty hygienicke KU v Praze 10, prednosta prof. dr. V. Hlavacek. Patologicko-anatomicky ustav lekarske fakulty hygienicke KU v Praze 10, prednosta doc. dr. J. Stolz.

(EPISTAXIS) (ADENOMA) (ADRENAL GLAND NEOPLASMS)

HAJEK, S.; GREGORA, Z.; STEFAN, J.; KRAL, Z.; CHYBA, J.; RUZICKA, L.; DOBRKOVSKY, M.; DOLEZALOVA, J.

Analysis of 147 fatal thermic injuries. Acta chir. plast. 5 no.3:193-204 '63.

1. Medical Faculty of Hygiene, Charles University, Prague (Czechoslovakia) Department of Pathology and Forensic Medicine Director: Doc. J. Stolz, M.D. Department of Health Organization, Medical Faculty of Hygiene, Prague Director: Prof. F. Blaha, M.D. The Burns Unit of the Clinic of Plastic Surgery, Charles University, Prague Director: Academician F. Burian.
(BURNS) (MORTALITY) (PATHOLOGY)
(ACCIDENT PREVENTION)

KRALEV, K.

"How I Work in my Forest Preservation Station." p.234
(GORSKO STOPANSTVO Vol. 9, no. 5, May 1953 Sofiya, Bulgaria)

SO: Monthly List of East European Accessions, Library of Congress, Vol. 2, No. 9, Oct. 1953, Uncl.

KRALICEK, J.

Distr. 4E2c(j)

Alkaline polymerization of caprolactam IV. Equilibrium and degradation with alkaline polymers of caprolactam. Jar. Kralicek and I. Sebenda (Inst. Chem. Technol., Prague). *J. Polymer Sci.* 30, 403-8(1958); cf. *C.A.* 52, 12529f.—Intrinsic viscosity of the polymer decreases for the first 50 hrs. at 220-50° but remains const. after that. The equil. value of the intrinsic viscosity depends on concn. of the catalyst and on temp. M. H. Dansig

74

I

CZECHOSLOVAKIA / High Molecular Chemistry.

Abs Jour : Ref Zhur - Khimiya, No 5, 1959, No. 18045

Author : Wichterle, O.; Kralicek, J.; Sebenda, J.
Inst : Not given
Title : Anionic Polymerization of Caprolactam 6. III. New Catalysts for Anionic Polymerization of Caprolactam 6

Orig Pub : Chem. listy, 1958, 52, No 4, 636-639

Abstract : The alkaline-catalytic polymerization of caprolactam 6 (I) is caused by any compound which may convert I into an anion of the -CO-N-type. These compounds may be divided into three groups: 1) acid salts, which can be easily decarboxylated with the formation of C-, O-, or N-anions; 2) salts of the light volatile acids; 3) acid salts that decompose in any other way than by the decarboxylation into strong alkaline compounds. A

Card 1/4

I- 1

CZECHOSLOVAKIA / High Molecular Chemistry I

Abs Jour : Ref Zhur - Khimiya, No 5, 1959, No. 18045

catalyst must dissolve in the molten I. The catalyst activity of compound of the first group does not depend upon alkalinity of the anion, formed in the decarboxylation process, but depends only on the rate of decarboxylation. For catalysts of the $R-CH_2-COOK$ type it increases in the order of $<-C_6H_5<-COOR$ $-CN$. Certain acids, the salts of which are easily decarboxylated, are not effective as catalysts. To these belong acid salts containing halogens, S, or the NO_2 group (potassium ethylxantogenate, sodium dimethyl-dithiocarbaminate, potassium nitroacetate, potassium trichloroacetate). Anions derived from such acids enter side reactions. Catalyst activities of acid salts were determined from the yield of polymers obtained when 1 mol of I and 0.005 mols of catalyst were heated up to a certain temperature level for a given length of time.

Card 2/4

T

CZECHOSLOVAKIA / High Molecular Chemistry I

Abs Jour : Ref Zhur - Khimiya, No 5, 1959, No. 18045

The following data were obtained (yield of polycaprolactam in %, reaction time in minutes, temperature): cinnamic acid Na - 78.0, 100, 260°; sodium phenylacetate - 89.5%, 120, 250°; potassium carbetoxyacetate - 88.7, 5, 260° or 91.9, 7, 220°; sodium malonate - 78.2, 45, 260°; potassium monomethyloxylate - 85.0, 5, 250°; potassium phenyl-carbaminate - 86.0, 10, 250°; sodium salt of N-carboxy-caprolactam - 89.5, 5, 250°; Na-salt of monoethylcarbonic acid - 84.9, 300, 163° or 67.0, 10, 220° or 91.3, 60, 220°; Na-salt monobutylcarbonic acid - 88.5, 5, 260°; KCN - 59.8, 50, 260°; KCNO - 74.5, 5, 250°; NaN_3 - 68.9, 150, 250°. All the above salts are soluble up to a concentration

Card 3/4 I-2

CZECHOSLOVAKIA / High Molecular Chemistry. I

Abs Jour : Ref Zhur - Khimiya No 5, 1959, No. 18045
Cont'd

of approx. 1% in the molten I at 80 - 100°. Insoluble are: Na-salt of monomethylcarbonic acid and Na-salt of malonic acid. The solubility of salts of acid esters of the carbonic acid increases with the increase of alkyl chain. Parts I and II were covered by the Ref Zhur - Khimiya, 1956, 54678, 65167. -- J. Plesek

Card 4/4

KRALICEK, J.; SEBENDA, J.

Alkaline polymerization of 6-caprolactam. Pt.13. Chem prum 13 no.10:545-549 O '63.

1. Katedra organicke chemie, Vysoka skola chemickotechnologicka a Ustav makromolekularni chemie, Ceskoslovenska akademie ved, Praha.

23570

Z/009/61/000/007/004/004
E112/E135

15.8107

AUTHORS: Králíček, Jaroslav; Šebenda, Jan; Zadák, Zdeněk; and Wichterle, Oto

TITLE: Alkaline polymerisation of ε-caprolactam. V. Alkaline polymerisation of ε-caprolactam for the production of large molded objects from high-molecular poly-6-capramides

PERIODICAL: Chemický průmysl, 1961, No.7, pp. 377-381

TEXT: Caprolactam polymerises in presence of the usual proton-donating catalysts at temperatures above the melting point of the polymer. Internal stresses may therefore develop in extrusion molded objects, and very careful annealing is needed to produce faultless material. The present paper is a further contribution to the study of base-catalysed polymerisation of ε-caprolactam, described in parts in previous issues of this journal. Very interesting catalysts were discovered in N-acetylcaprolactam and N,N'-tetraacetylhexamethylenediamine. Addition of the catalysts to a solution of the sodium salt of ε-caprolactam (using ε-caprolactam as solvent) increases the

Card 1/ 5

Alkaline polymerisation of ε- .....

polymerisation rate to such an extent that it proceeds already at temperatures well below the melting point of the polyamide. Polymerisation can therefore lead to a polymer in the solid state, and difficulties arising out of changes of density during crystallisation (internal stresses) can be mitigated, if not entirely eliminated. During polymerisation of ε-caprolactam, 28 cal/g are liberated, corresponding to a temperature increase of 50 °C in an adiabatically conducted process. Thus, in order not to exceed the melting point of the resulting polyamide, polymerisation should be initiated below 160 °C, as otherwise a polymer melt would be produced. The process presently described leads directly to a solid polymer, practically free of internal stress. Optimum reaction conditions for the production of large, molded objects from high-molecular-weight polycapramide are investigated, particularly the effects of: 1) concentration of N-acetylcaprolactam; 2) concentration of sodium salt of ε-caprolactam; 3) initial temperature; and 4) purity of ε-caprolactam. An investigation of homogeneity of the finished material in relation to conversion rate and degree of polymerisation was also undertaken. Three different samples of caprolactam were compared:

23570

Z/009/61/000/007/004/004
E112/E135

Alkaline polymerisation of ε- .....

1) a commercial product of Czechoslovak origin, purified and freed of moisture by distilling off in vacuo 10% of the original charge (the distillation residue was found of sufficient purity for further experiments); 2) caprolactam crystallised from water; 3) caprolactam crystallised from benzene. N-acetyl-ε-caprolactam was prepared according to the method of R.E. Benson and T.L. Cairns (J. Am. Chem. Soc., 70, 2115 (1948). Sodium salt of caprolactam was obtained by adding, in an inert atmosphere and protected from moisture, a solution of sodium methylate in anhydrous methyl alcohol to ε-caprolactam. Polymerisation experiments were undertaken with solutions of the sodium salt of caprolactam in distilled caprolactam. Experimental details are as follows. Caprolactam, heated to the reaction temperature, was transferred together with the solution of its sodium salt to the polymerisation vessel (stainless steel). The charge amounted to 1.1 kg caprolactam. After stabilisation of temperature the calculated amounts of N-acetyl-ε-caprolactam were added under efficient stirring, the operation being carried out in an atmosphere of nitrogen. Heating by means of a thermomantle, which was

X

Card 3/ 5

23570
Z/009/61/000/007/004/004
E112/E135

Alkaline polymerisation of ε- .....

switched off as soon as the temperature of the reaction mixture rose by 50 °C. Results: best products were obtained with caprolactam crystallised from water, but properties of polymer from technical caprolactam were of sufficient standard to warrant exclusive use in further trials. The effect of the initial polymerisation temperature on polymerisation rate was studied and results are summarised by graphs. Equilibrium is reached after 10-35 min, and rate of polymerisation increases with increase of temperature. Graphs are given for the polymerisation of caprolactam with 0.3 mole % sodium-caprolactam + 0.3 mole % N-acetylcaprolactam. Rate of reaction was very strongly affected by the concentration of N-acetylcaprolactam. The number of macromolecules formed during polymerisation is inversely proportional to the intrinsic viscosity and increases linearly as the concentration of acetyl-caprolactam increases. Rate of polymerisation is influenced by the concentration of sodium-caprolactam in a similar manner. As demonstrated graphically, the intrinsic viscosity remains practically constant with increased concentration of sodium-caprolactam. The new polymerisation method gave reproducible results. Samples of the polymer withdrawn from the

Card 4/5

Alkaline polymerisation of ε- Z/009/61/000/007/004/004
E112/E135

centre and peripheral parts of the block showed almost identical degrees of polymerisation and contents of monomer. Removal of the polymer from the mold did not present difficulties (owing to contraction, after cooling, by about 2-3%). Experimental blocks of diameters over 20 cm and weighing 9 kg were prepared, also bearings and cogwheels. The new method is protected by a number of Czechoslovak patents.

There are 8 figures, 3 tables and 12 references: 7 Czech, (including citation of patents) 1 Russian, 1 German, 1 Dutch (patent) and 2 English, which read as follows:

Ref.7: A.B. Meggy, J.Chem.Soc., 796 (1953).
Ref.9: R.E. Benson and T.L. Cairns, J.Am.Chem.Soc., 70, 2115 (1948).

ASSOCIATION: Ústav makromolekulární chemie ČSAV a Vysoká škola chemickotechnologická, Praha
(Institute of Macromolecular Chemistry, Czechoslovak AS, and University of Chemical Technology, Prague)

SUBMITTED: September 1, 1960

Card 5/5

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826020008-5"

KRALICEK, J.

"Handbook of the chemistry of high molecular compounds" by I.P. Lossew [Losev, I.P.], O.Ja. Fedotowa [Fedotova, O.Ya.]. Reviewed by J. Kralicek. Chem listy 58 no.1:43 Ja'64.

SEBENDA, J.; KRALICEK, J.

Alkaline polymerization of 6-caprolactams. Pt. 15. Coll Cz Chem 29 no.4:1017-1028 Ap '64.

1. Institute of Macromolecular Chemistry, Czechoslovak Academy of Sciences and Institute of Organic Technology, Higher School of Chemical Technology, Prague.

KRALICEK, Ladislav [deceased]; FRANZ, Ferdinand; QUADRAT, Otakar st.

Study of reactions between oxides and sulfides of metals used in metallurgy. Sbor chem tech 4 no.2:141-157 '60.
(EEAI 10:9/10)

1. Katedra chemicke technologie kovu, Vysoka skola chemicko-technologicka, Praha.

(Metals) (Oxides) (Sulfides)

KRALICEK, Q.

KRALICEK, Q. Technical standardization in the Bulgarian People's Republic. p. 26.

Vol. 6, no. 2, Feb. 1957
NORMALISACE
TECHNOLOGY
Czechoslovakia

So: East European Accession, Vol. 6, No. 5, May 1957

KRALICEK, Q.; CIR, J; NOVICKY, A.

The Press should contribute even more to further technical development. p. 3

VYNALEZY A NORMALISACE, OCHRANNE ZNAMKY, CHRANENE VZORY. Praha, Czechoslovakia, Vol. 3, No. 6, June 1959

Monthly List of East European Accessions, (EEAI), LC. Vol. 8, No. 9, September, 1959
Uncl.

KRALICEK, Quido, dr.

Ensuring the postgraduate study of technical standardization at the Institute of Economic Planning of the Highe School of Economics, Bratislava. Normalizace 13 no.2:62 F '65.

1. Office of Standardization and Measurement, Prague.

KRALICH, B.

Yugoslavia (L30)

Agriculture - Plant and Animal Industry

Progressive payment according to the amount of work done. p. 35. GODISEN ZBORNIK, Vol. 2, 1948/49.

East European Accessions List, Library of Congress, Vol. 1, no. 14, Dec. 1952. UNCLASSIFIED.

UMANSKIY, Yu.A.; KRALICH, I.M.; SIDORIK, [illegible].A.

Relation of the distribution of labelled antibodies in rat organs to the method of their introduction into the body. Pat. fiziol. i eksp. terap. no.2:65-69 '64. (MIRA 17:9)

1. Ukrainskiy nauchno-issledovatel'skiy institut eksperimental'noy i klinicheskoy onkologii (dir. - akademik AN UkrSSR prof. R.Ye. Kavetskiy), Kiyev.

CHERNICHENKO, V.A. (Kiyev, ul. Krasnoarmeyskaya, d.134, kv.132)
KRALICH, N.M. (Kiyev, ul. Karla Libknekhta, 7-2, kv.47)

Stimulating effect of thesane and pentoxyl on the growth of transplantable tumors. Vop. onk. 9 no.7:41-44 '63 (MIRA 16:12)

1. Kafedra rentgenologii (zav. - prof. A.Ye. Rubasheva) Kiyevskogo instituta usovershenstvovaniya vrachey (rektor- dotsent M.N.Umovist).

BOUSEK, Otakar, inz.; KRALICKOVA, Hana

International standardization cooperation in agriculture.
Normalizace 11 no.9:306-308 S '63.

BOUSEK, Otakar, inz. KRALICKOVA, Hana

List of the Czechoslovak and foreign technical standards in agriculture. Normalizace 11 no.9:Supplement: Zahranicni normy z oboru zemedelstvi no.9:1-40 '63.

A KRALICKOVA, J. 7

The Dumas method for determining nitrogen modified by Zimmermann for semimicrodeterminations. J. Králíčková. *Chemie* (Prague) 4, 8-10(1948); cf. Z., *C.A.* **38**, 1089⁹. Frank Marsh

cd KRALICKOVA, J.

7

Determination of halogens according to Stepanow. J. Králíčková. *Chemie* (Prague) 3, 80(1948).- Pour 3 cc. abs. EtOH over 10-20 mg. of the substance in an Erlenmeyer flask attached to a reflux condenser. Introduce 0.4 g. of Na and after 4 min. add 3 cc. abs. EtOH and allow it to stand for 3 min. After adding 6 cc. of halogen-free water, heat for 3 or 4 min. at the b.p., dil. with water, acidify with HNO_3, and det. the Cl^- by any standard method, but preferably by weighing the pptd. AgCl AmOH contg xylene or toluene can be used instead of the abs. EtOH.

Frank Maresh

1952

KRALIK, A.

Increasing the life of ingot molds. p.205

KOHASZATI LAPOK. (Magyar Bsnyaszati es Kohaszati Egyesulet)
Budapest, Hungary
Vol. 13, no.9, Sept. 1958

Monthly List of East European Accessions (EEAI) LC., Vol. 8, no.7, July 1959
Uncl.

S/137/62/000/002/018/01
A006/A101

AUTHORS: Králik, B. Makray, T., Toth, G.

TITLE: Investigating Al distribution in semi-killed steel ingots and plates

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 2, 1962, 43, abstract 2Г261 ("Dunai vasmű", 1960, v. 1, no. 1, 22-32, Hungarian)

TEXT: The author describes a technology for melting and teeming 1.4 - 3.0-ton semi-killed steel ingots at the Dunai Metallurgical Combine. Final deoxidation is performed with Al powder (0.18 - 0.24 kg/t) through a funnel prior to completing the filling of the mold. The authors studied the distribution of deoxidation products in ingots and plates (8 - 25 mm) by the method of radioactive isotopes (with the use of Al tagged with Zn^{65}). They investigated also topography of plate defects by ultrasonic control to reveal the causes of rejects due to surface (15.16%) and internal (13.19%) defects. The non-uniform distribution of Al_2O_3 impurities revealed over the cross section of ingots and sheets was about 26% (increasing percentage towards the center) and over the height was ~71% (displacement towards the top of the ingots and plates). Rejects during the rolling of plates increase on account of a stronger segregation

Card 1/2

3/137/62/000/002/018/144
A006/A101

Investigating Al distribution ...

of Al_2O_3 impurities which is accompanied by the formation of cavities, unable to be welded-up, at the ingot top in the case of excessive final deoxidation, and by the formation of internal blisters in the case of weak final deoxidation. The formation of cavities which are unable to be welded-up, is explained by the joint effect of emanating gases and shrinkage. To improve the quality of ingots, it is recommended to use risers and to add the metal after final deoxidation through a funnel during the teeming into molds.

Yu. Minayev

[Abstracter's note: Complete translation]

Card 2/2

NAGY, Angela; KRALIK, Bela (Pestszentlorinc)

A two-hundred-fold worker-innovator about the innovator movement.
Ujit lap 13 no.23:14 D '61.

1. Csoportvezeto lakatos, a Lorinci Hengermu ketszazszoros ujitoja.

KAPTAY, Gyorgy; KRALIK, Bela

Factory news. Koh lap 93 no.11:504 N '60.

ALEXITS, G. [Alexits, Gyorgy]; KRALIK, D.

On the absolute summability and the convergence of orthogonal series. Mat kut kozl MTA 7 series A no.3:363-371 '62.

1. Technische Hochschule, Budapest. (for Kralik).

KRALIK, Dezső

Mathematical Reviews
May 1954
Topology

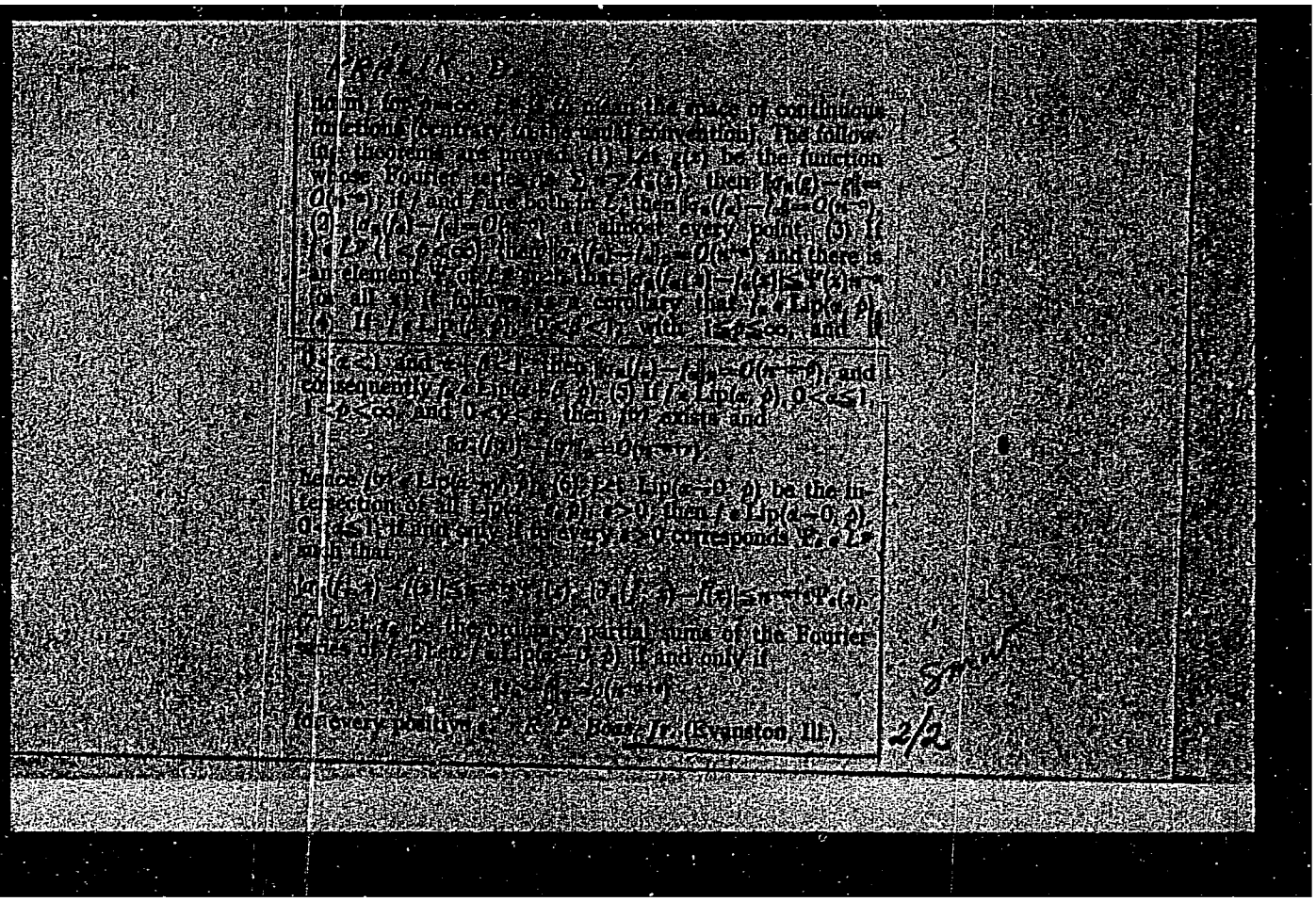
Králik, Dezső. Concerning a remark on universal spaces. Magyar Tud. Akad. Mat. Fiz. Oszt. Közleményei 3, 561–562 (1953). (Hungarian)

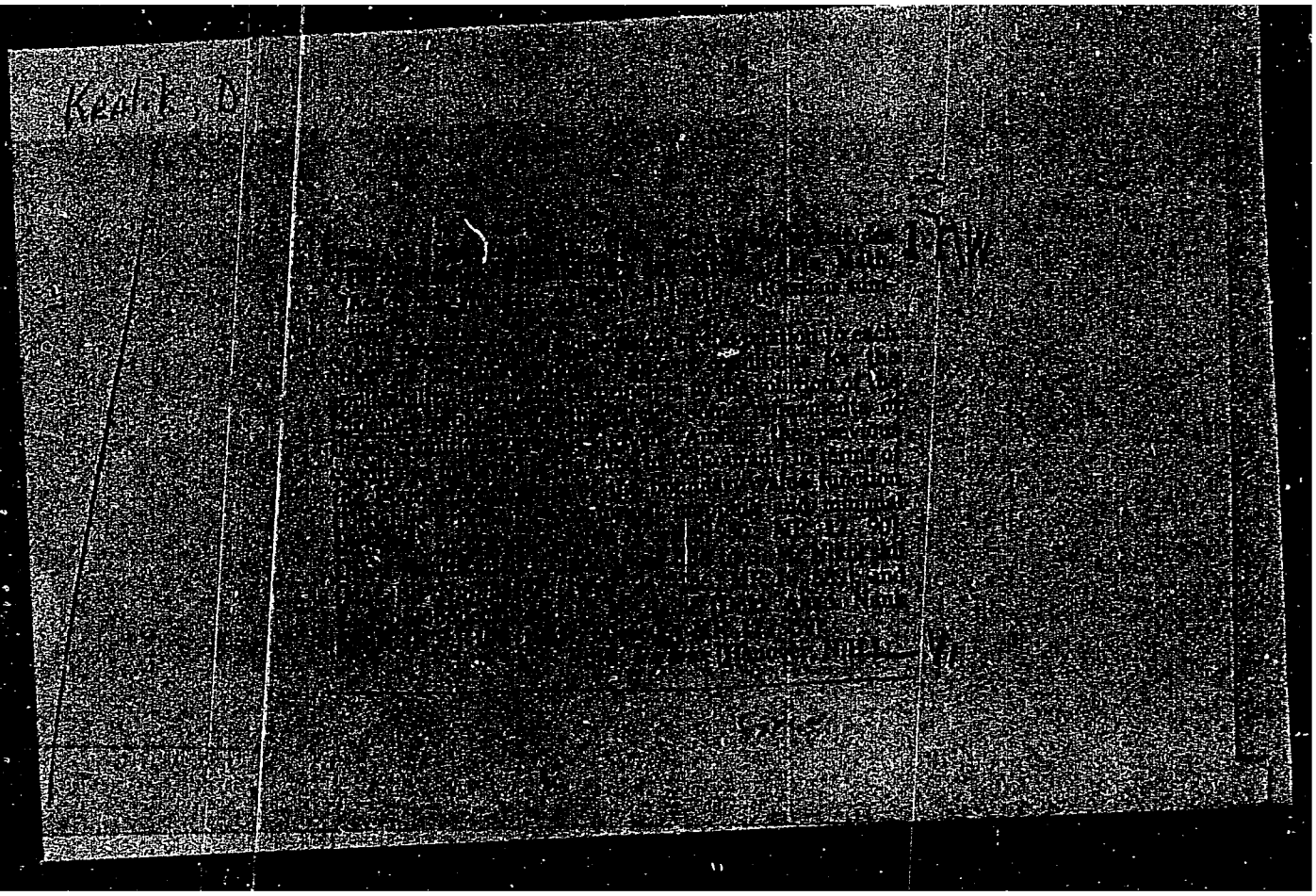
The remark is that the inverse of a homeomorphism from a separable metric space R into the Hilbert cube is uniformly continuous only if R is totally bounded. *P. R. Halmos.*

KRALIK, D.

Králik, D. Untersuchung der Integrale und Derivierten gebrochener Ordnung mit den Methoden der konstruktiven Funktionentheorie. Acta Math. Acad. Sci. Hungar. 7 (1956), 49–64. (Russian summary)

The author investigates the degree of approximation of fractional integrals and derivatives by (C, 1) partial sums of their Fourier series, and obtains as corollaries some theorems of Hardy and Littlewood about the Lipschitz classes to which fractional integrals and derivatives belong [Math. Z. 27 (1928), 565–606; Zygmund, Trigonometrical series, Warszawa-Lwów, 1935, chap. 9]. The author's method, due to Alexits [same Acta 3 (1952), 29–42; MR 14, 370] depends on some lemmas on series in a Banach space; a typical one is as follows. Let $\{\phi_n\}$ be a sequence of elements of a Banach space, σ_n the arithmetic means of the partial sums of $\sum \phi_n$, and $\sigma_n(\alpha)$ the arithmetic means of the partial sums of $\sum n^{-\alpha}\phi_n$, where $0 \leq \alpha < 1$. Then if there is an element S such that $\|\sigma_n - S\| = O(n^{-\beta})$, there is an element $S(\alpha)$ such that $\|\sigma_n(\alpha) - S(\alpha)\| = O(n^{-\alpha-\beta})$ provided that $0 \leq \beta < 1$ and $\alpha + \beta < 1$. Now let f be a periodic function in L^p, $\tilde{f}$ its conjugate, f_α its αth (Weyl) integral, and $f^{(\alpha)}$ its αth derivative $(0 < \alpha < 1)$. Let $\sum A_n(x)$ be the Fourier series of f. By $\|\ldots\|_p$ we denote the L^p





ALEXITS, Georg [Alexits, Gyorgy]; KRALIK, D.

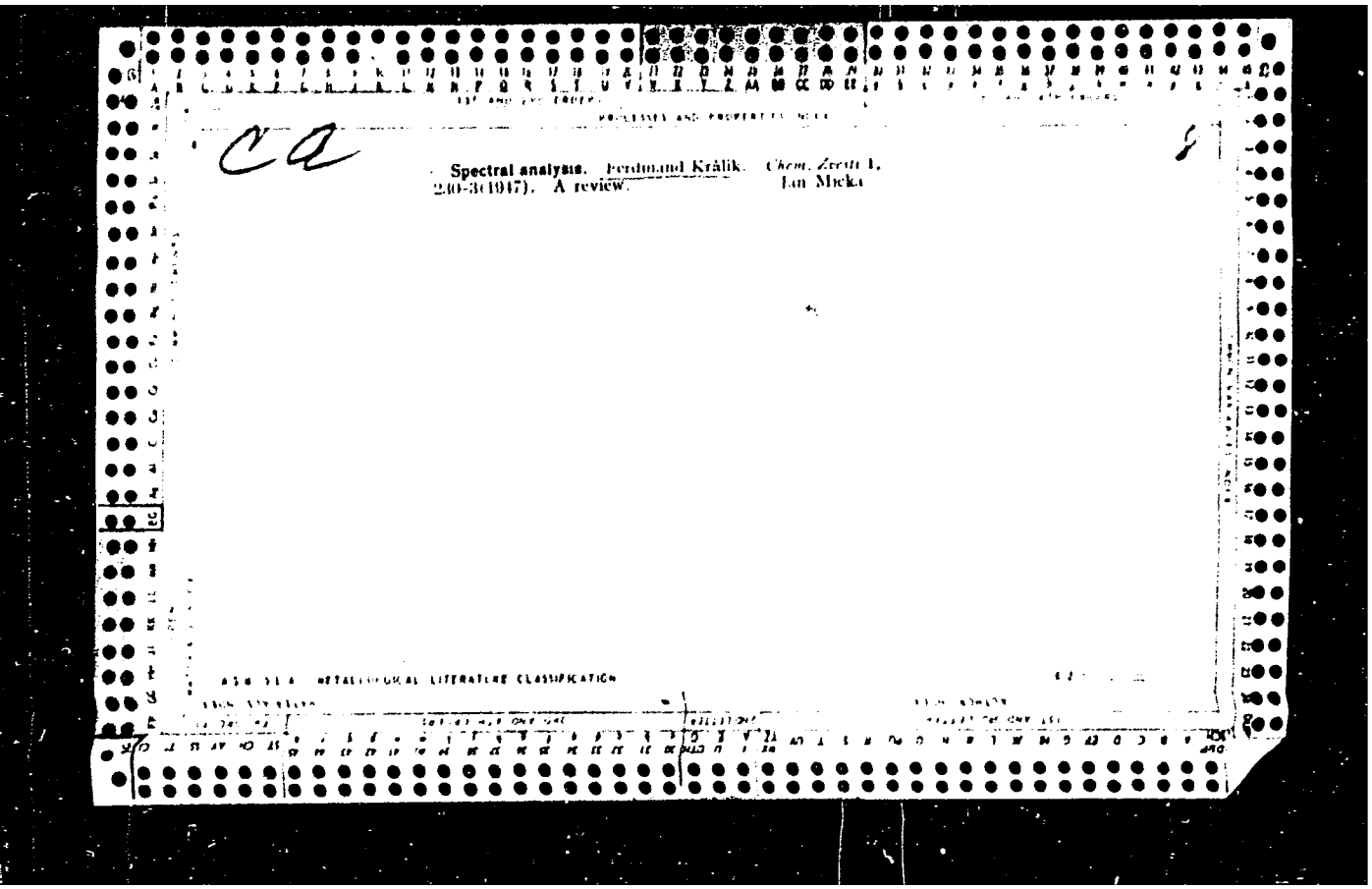
Degree of approximation in case of strong summation of continuous functions. Mat kut kozl MTA 8 series A no. 3:317-327 '63('64).

1. Technische Hochschule, Budapest.

KRALIK, F., dr.; DUHAJ, P., inz.; HAVALDA, A., inz., C.Sc.; SCHWEIGHOFFER, A., inz.; OPRAVIL, O., inz.

The structural stability of resistance of butt welded 16/13 Nb austenitic steel. Zvar sbor. 11 no.1:80-104 '62.

1. Slovenska akademia vied, Bratislava, Vyskumny ustav zvaracsky, Bratislava.



Ca

Spectral analysis. Ferdinand Králik. *Chem. Zvesti* 1, 240-3(1947). A review. Ian Micka

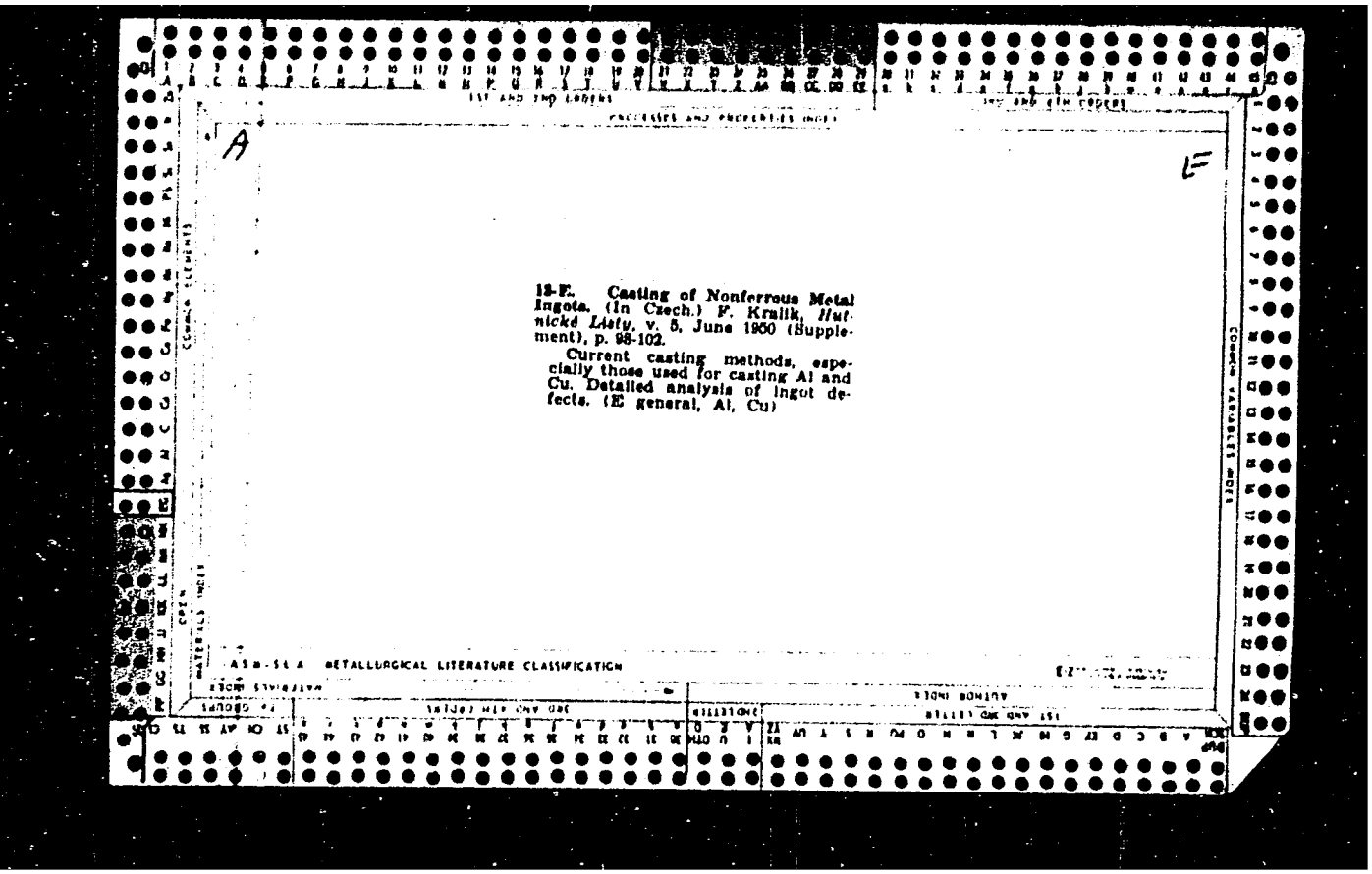
CA

7

PROCESSES AND PROPERTIES INDEX

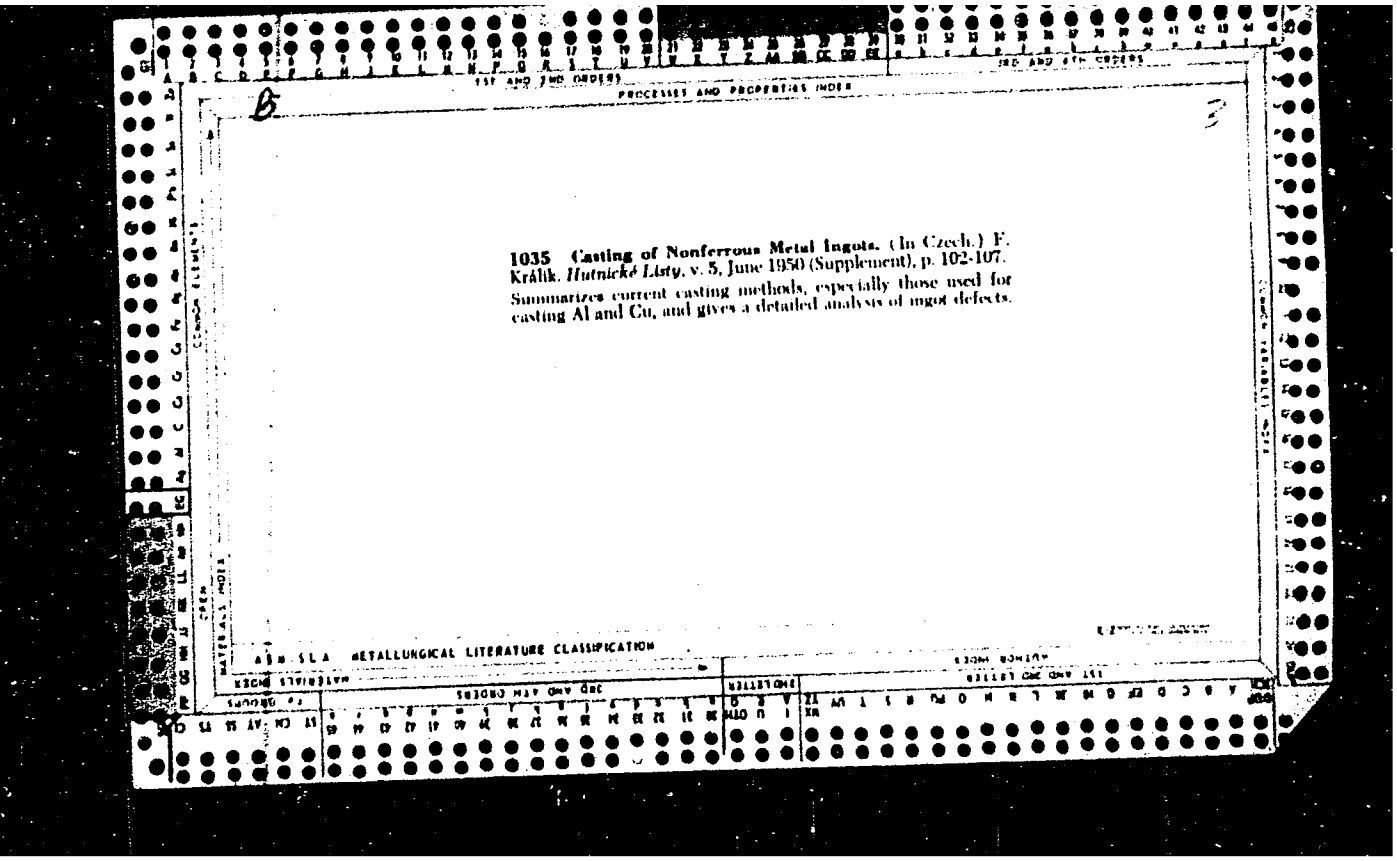
The spectral analysis of brasses by Pfeilsticker's intermittent arc. Ferdinand Králík. *Chem. Zvesti* 1, 277-94(1947).—Pfeilsticker's intermittent arc and Zeiss Q 24 app. give good results in the detn. of Al, Sn, Pb, and Mn. The sparking by the Fuess app. is not satisfactory for detg. traces of Al and Fe. The sparking curves can be explained by the theory of Mader Potzelberger (C. A. 40, 7044[1]) and by the dependence on the ionization potentials. The intensity of spectral lines is influenced by the ionization potentials of the alloyed elements and m. p. of the alloys. There is a mutual influence of Cu and Zn on the detn. and calibration of Al and Sn. Jan Micka

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

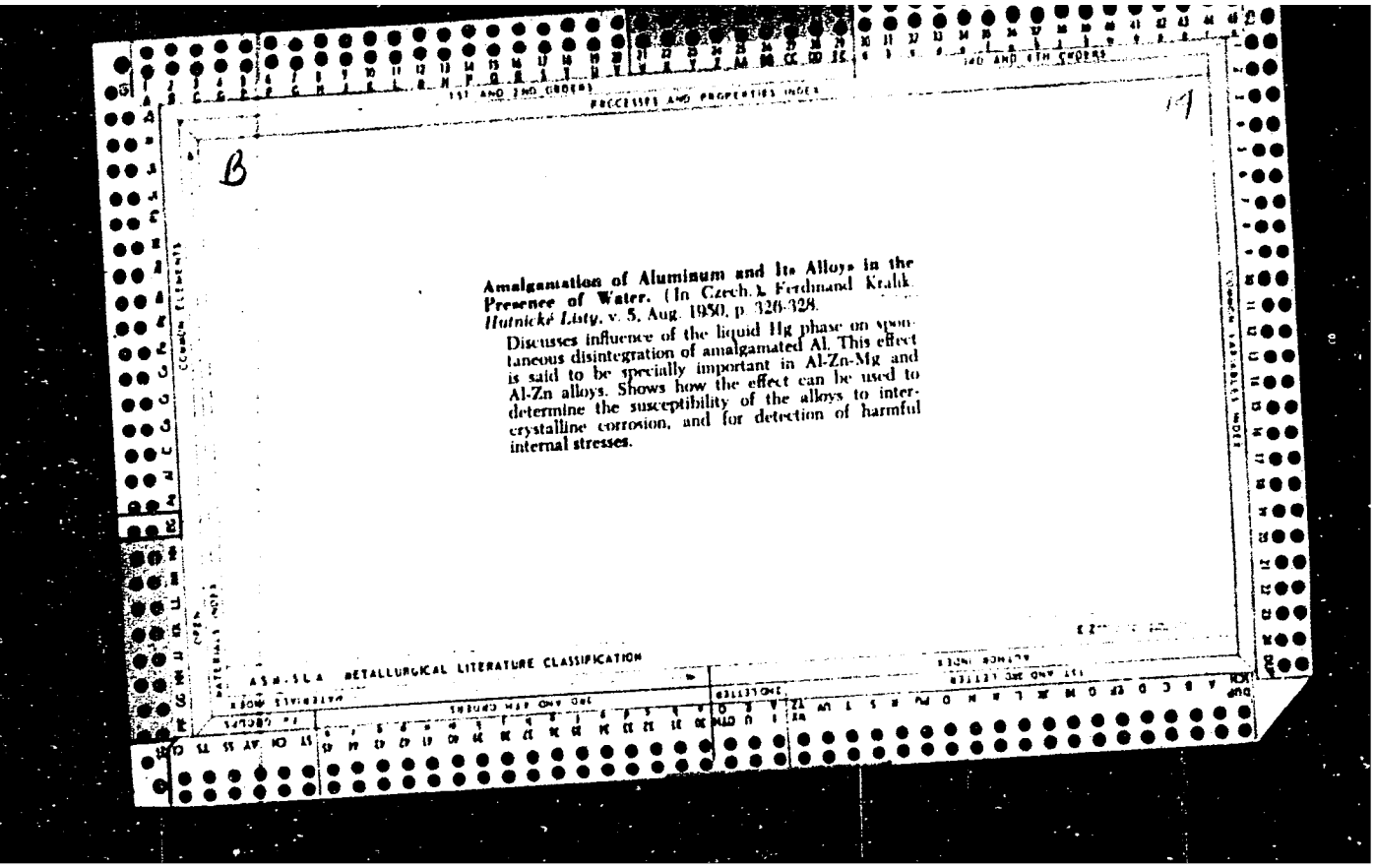


13-E. Casting of Nonferrous Metal Ingots. (In Czech.) F. Kraiik, *Hutnicke Listy*, v. 5, June 1950 (Supplement), p. 98-102.

Current casting methods, especially those used for casting Al and Cu. Detailed analysis of ingot defects. (E general, Al, Cu)



1035 **Casting of Nonferrous Metal Ingots.** (In Czech.) F. Králik. *Hutnické Listy*, v. 5, June 1950 (Supplement), p. 102-107.
Summarizes current casting methods, especially those used for casting Al and Cu, and gives a detailed analysis of ingot defects.



B

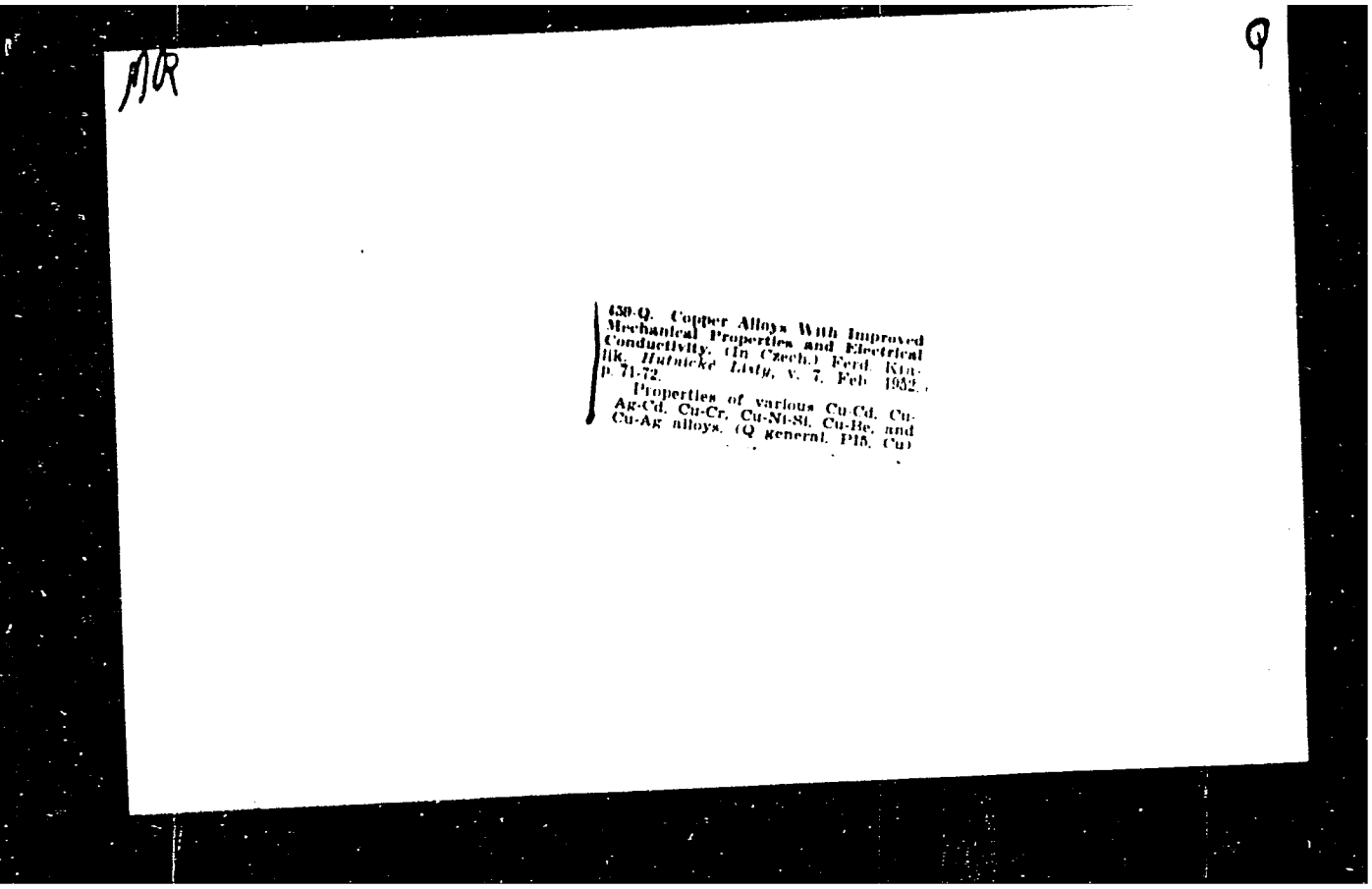
Amalgamation of Aluminum and Its Alloys in the Presence of Water. (In Czech.) Ferdinand Kralik. *Hutnické Listy*, v. 5, Aug. 1950, p. 326-328.

Discusses influence of the liquid Hg phase on spontaneous disintegration of amalgamated Al. This effect is said to be specially important in Al-Zn-Mg and Al-Zn alloys. Shows how the effect can be used to determine the susceptibility of the alloys to intercrystalline corrosion, and for detection of harmful internal stresses.

C.A.

1

Plastic deformation of electrolytically polished brass surfaces Ferd. Krabik and Ivo Zaduš *Hutnick. Listy* 5, 412-14(1950). The authors have investigated the possibility of utilizing electrolytically polished surfaces for examining the plastic deformation of brass specimens. Specimens of the α- and the α + β-type were electrolytically polished in 85% H_3PO_4 diluted by MeOH to a sp. gr. of 1.4. A voltage of 5 to 8 v. and a current of 20 to 30 amp. sq. dm. were used. The polishing time was 1 to 10 min., according to the state of the surface after preliminary treatment and according to the compn. of the specimens. The size of the specimens was 10 × 2 × 80 mm. and one surface of the area 10 × 80 mm. was electrolytically polished. The plastic deformation was obtained by applying tensile stress to the specimens in a tensile strength testing machine. Photomicrographs were taken for various stresses and degrees of deformation. These show that the progress of plastic deformation and its influence on the changes of the grain structure can conveniently be studied from the changing appearance of a surface which has been electrolytically polished before the plastic deformation started. The formation of sliding planes and the displacement of crystallites can be conveniently observed. This method will be useful for investigating creep phenomena in tests of long duration and also for studying the formation of cracks and stress concn. Unlike a mechanically polished surface, electrolytically polished surfaces do not show any effect of deformation of heating due to the contact of this surface with the polishing tool and thus represent an ideal cross section through the material. E. Gross



9

650-Q. Copper Alloys With Improved Mechanical Properties and Electrical Conductivity. (In Czech.) Ferd. Kinzl. Hk. *Hutnické Listy*, v. 7, Feb 1952, p. 71-72.

Properties of various Cu-Cd, Cu-Ag-Cd, Cu-Cr, Cu-Ni-Si, Cu-Be, and Cu-Ag alloys. (Q general, P15, Cu)

AUTHOR: Králik, Ferdinand, Engineer Doctor CZECH/34-59-9-3/22

TITLE: Plasticity of Metals and of Some Inorganic Substances as a Function of the Latent Fusion Heat, Latent Evaporation Heat and Sublimation Heat

PERIODICAL: Hutnické listy, 1959, Nr 9, pp 758-761

ABSTRACT: Y. A. Klyachko (Ref 1) proposed using as an index of plasticity of metals the difference between the fusion and the boiling points. This relation is entered for a number of substances in the graph, Fig 1. According to Y. S. Yumanskiy (Ref 2) there is an inter-relation between the maximum possible hardness of Mg, Al, Cu, Ni, Fe and their sublimation heat; R. Fricke (Ref 3) also states that there is a relation between the hardness and the sublimation heat. Calculated values, entered in Table 1, of the ratio of the sublimation heat to the fusion heat versus the fusion temperature, graphed in Fig 2, indicate that there is an unequivocal relation between the plasticities of metals and of certain inorganic substances and the respective sublimation heat to fusion heat temperature ratios . The calculations are based on the

Card 1/2

KRALIK, F.

Distr: 4E2c(m)

Reaction of ruthenium(III) and ruthenium(IV) chlorides with sodium azides. V. Vlček, F. Králík and J. Souček (Vysoká škola chem.-technol., Prague). *Collect. Czechoslov. Chem. Communs.* 25, 2155-60(1960)(in German).—Ru(III) and Ru(IV) salts react in HCl solns. with azide to form characteristically colored complex compds. Ru(IV) chloride forms unstable red solns. with NaN_3; this reaction is followed by the redn. of Ru to the trivalent form. The Ru(III) salts form a complex with NaN_3 with a ratio $Ru:N_3^- = 2$ and a sharp absorption max. at 290 mμ. E. Erdős

35023
Z/046/62/000/001/004/007
D007/D102

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AUTHORS: Králik, F., Doctor; Duhaj, P., Engineer; Havalda, A., Engineer, Candidate of Sciences; Schweighofer, A., Engineer; and Opravil O., Engineer

TITLE: The problem of structural stability of 16/13 Nb austenitic steel in resistance flash butt welding

PERIODICAL: Zváračský sborník, no. 1, 1962, 80-104

TEXT: Some mechanical properties and structural changes in the heat-affected zone of Type 16-13Nb steel at resistance flash butt welding were studied to resolve controversial interpretations regarding the causes of cracking in the weld area of this steel type. A thermal-cycle simulator with programable heat-treatment of test specimens was built for this purpose at the Laboratórium fyziky kovov SAV (Laboratory of Metal Physics, Slovak AS). In the test program, three thermal cycles were simulated with the following respective maximum temperatures: T_{min}=900°C; T_{inter}=1100°C; and T_{max}=1300°C. The influence of these cycles on the

4

Card 1/2

The problem of structural ...

structural stability of the investigated steel was determined by: Optical and electron microscopy; X-ray and electron diffraction; microchemical analysis and spot X-ray spectral analysis; and magnetometric analysis. From the results obtained, it is concluded that the final mechanical properties of the steel are greatly influenced not only by the sigma phase, but also by the morphology and distribution of niobium carbide. However, the cause of the cohesion loss along the grain boundaries cannot be explained merely by the observed phase transformations, as proposed by Moore and Griffith [Journal Iron Steel Inst. 197, 1961, 1, 29-39], but is rather attributable to the combined effects of various factors, such as liquid film along the grain boundaries; internal stresses; formation of microcracks upon cooling; hot and cold brittleness; formation of a new phase; local formation of niobium eutecticum; etc., as suggested by Heuschkel [Welding Journal 35, 1956, 12, 569-581]. There are 34 figures and 3 tables.

ASSOCIATIONS: SAV Bratislava; VÚŽ Bratislava

Card 2/2

G/014/62/000/004/003/006
D030/D109

AUTHORS: Králik, F., Doctor, Duhaj, P., Engineer, Havalda, A., Engineer, Schweighofer, A., Engineer, and Opravil, O., Engineer (Bratislava)

TITLE: The stability problem of the structure of 16/13/Nb-chrome-nickel steel butt-welded according to the gas-welding method

PERIODICAL: Schweisstechnik, no. 4, 1962, 185-186

TEXT: The increased application of austenitic steels in the chemical industry and in thermal power plants continuously demands higher specifications for reliable weldability, permanent heat resistance and corrosion resistance. Studies of the phase conversions in the heat-affected zone of an austenitic steel during the welding process or heat treatment are of great importance. Comprehensive tests, particularly on the basis of thermal cycles, showed that cracks are caused by the combined effect of a number of factors, e.g.: liquid film around the grain boundaries, inner stress, formation of micro-cracks during cooling, hot- and cold-shortness, generation of a new phase in the local formation of a eutectic, etc. The σ-phase and form and distribution of niobium carbides also have a considerable influence on the resulting properties.

Card 1/1

KRALIK, F.; VRESTAL, J.

Complex compounds of ruthenium with quinquevalent heterocyclic compounds. Part 3: Reaction of ruthenium(II)-ions with pyrazole, 3,5-dimethylpyrazole imidazole and benzimidazole. Coll Cz Chem 27 no.7:1651-1657 Jl '62.

1. Militarakademie A. Zapotocky, Brno.

SCHWEIGHOFER, A ; KRALIK, F.

Explosive forming of thin metal sheets. Strojirenstvi 15 no.2:105-109 F '65.

1. Laboratory of Metal Physics of the Slovak Academy of Sciences, Bratislava.

KRALIK, FRANTISEK

CZECHOSLOVAKIA

KRALIK, Frantisek CSSR

Prague, Casopis pro mineralogii a geologii, No 1, 1963, pp 85-87

"Preliminary Report on New Discoveries of Aragonite in Czechoslovak Caverns"

SEBO, Pavel; KRALIK, Frantisek

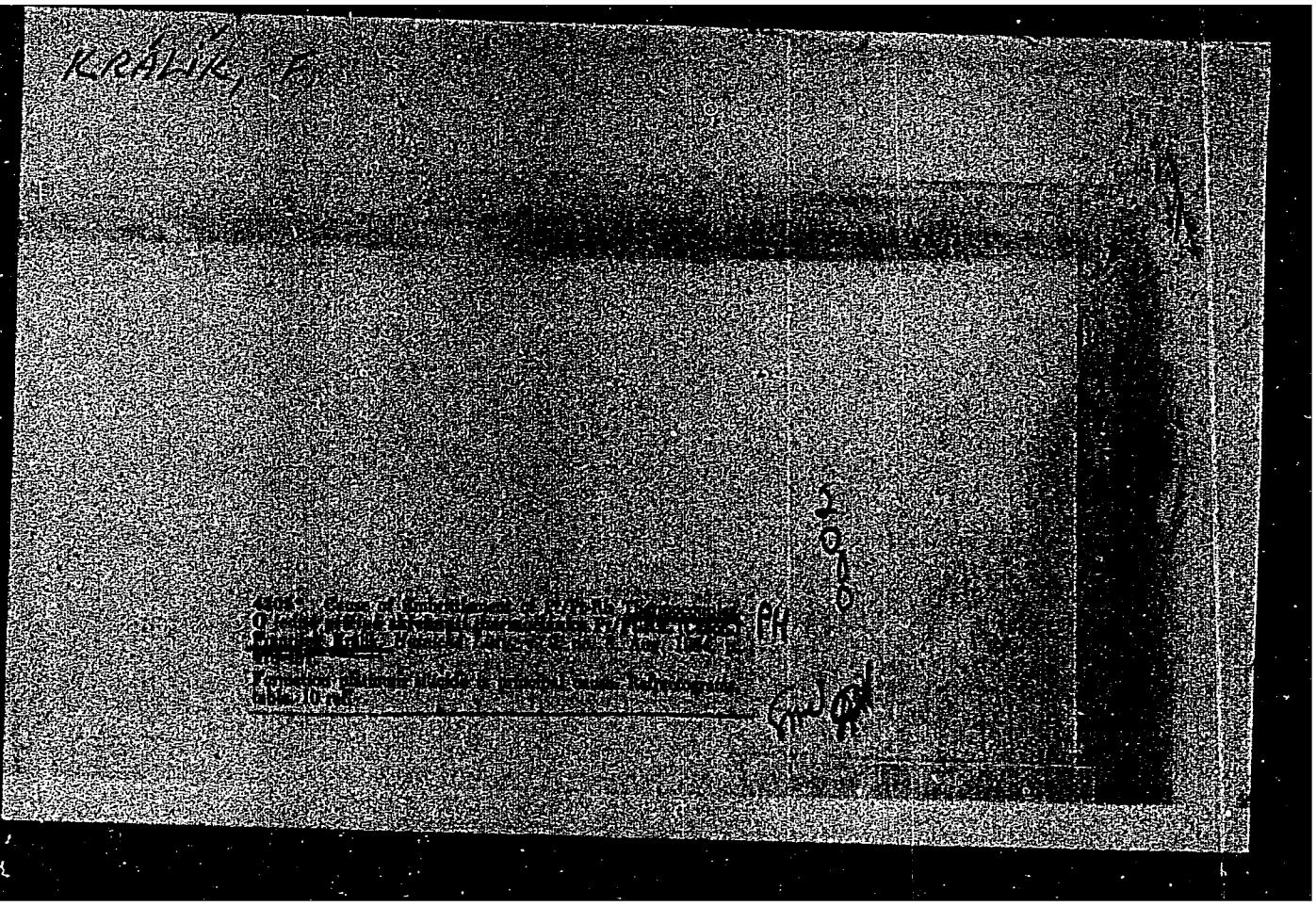
Orientation relation of vanadium carbide to ferrite. Cs cas fys 13 no.3:181-188 '63.

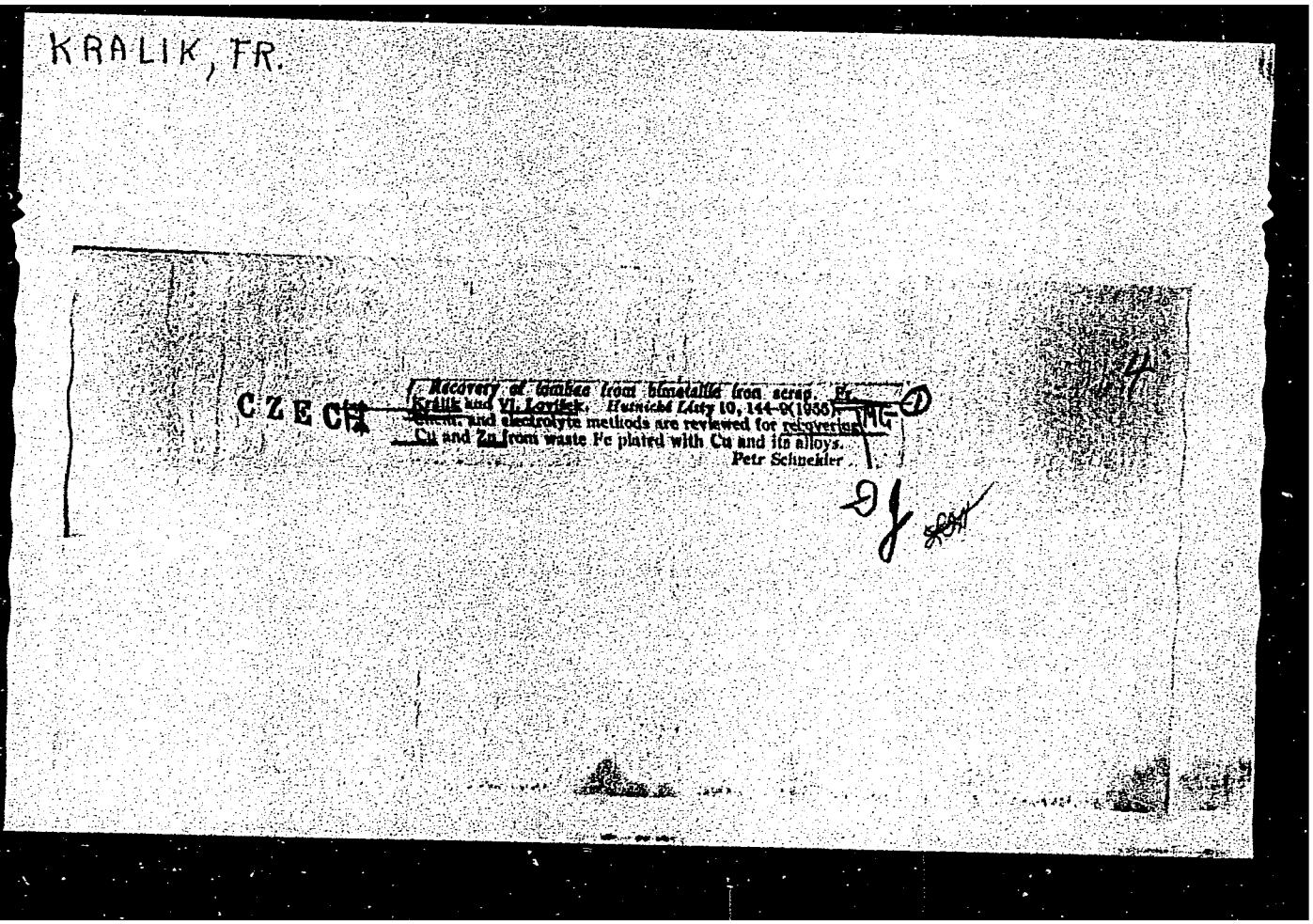
1. Laboratorium fyziky kovov, Ceskoslovenska akademie ved, Bratislava.

KRÁLIK, FRANTISEK

B. T. R.
June 1954
Metals-Metallography, Transformations, and Structures

8612* Examining Structural Changes in Connection With Secondary Hardening of Low Alloy Boiler Steel by Electronographic Method. (Czech.) František Králík. *Hutnické Listy*, v. 9, no. 2, Feb. 1954, p. 77-83.
Precipitation of alloy carbides at temperatures between 450 and 700 C considered primary cause for secondary hardening. Tables, micrographs, photographs, graph. 4 ref.





KRALIK, FR.

CZECH

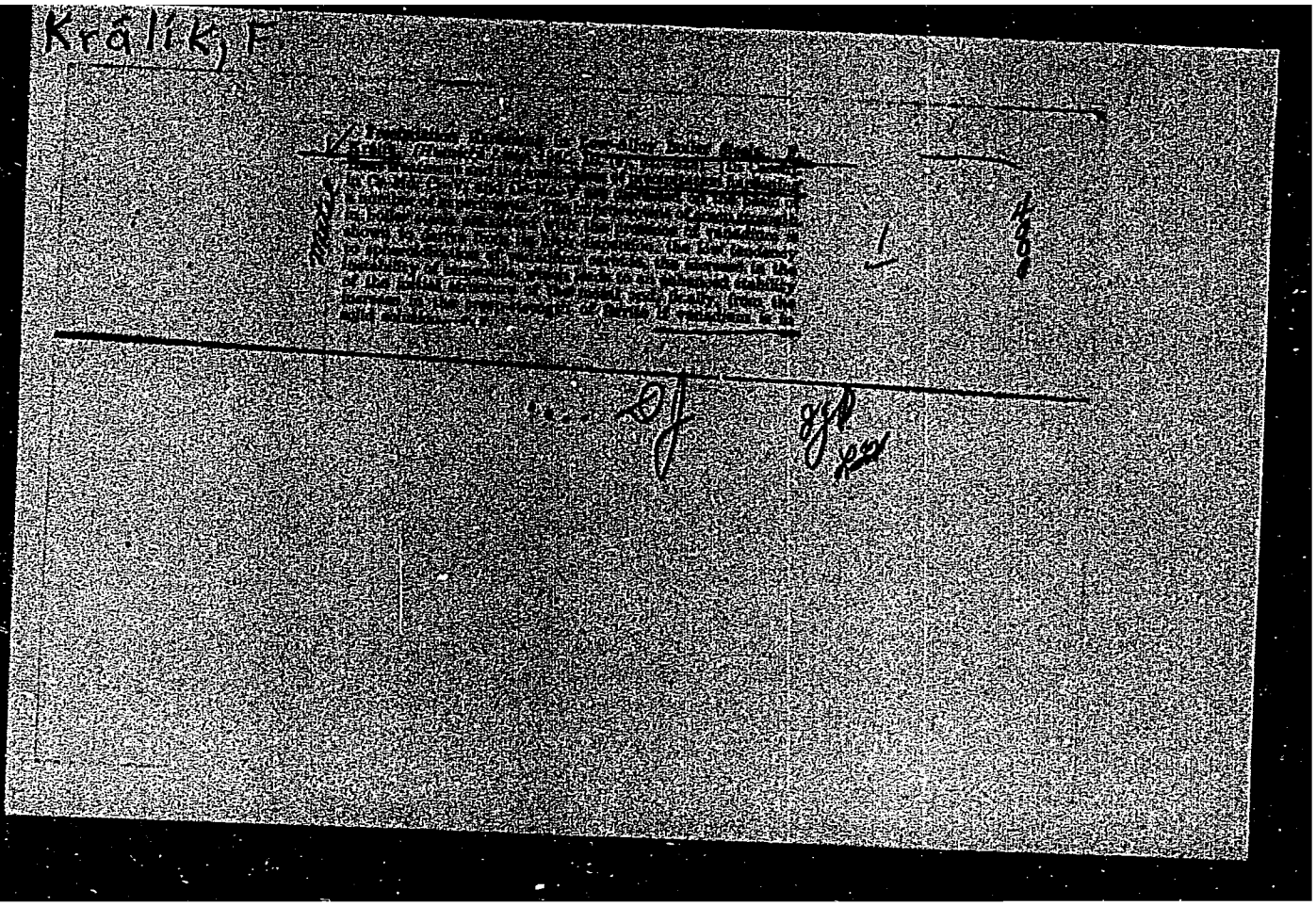
Recovery of Cu and Zn from bimetallic iron scrap. F. Kralik and V. Lavicek. *Hutnicke Listy* 10, 144-9(1955). Chem. and electrolytic methods are reviewed for recovering Cu and Zn from waste Fe plated with Cu and its alloys. Petr Schnekler.

~~FRANTISEK~~, KRALIK, Frantisek

CZECH

12101* Electron Diffraction Method and Its Use in Metallography; Especially in the Metallography of Steel. Elektronová difraktografie a její použití v metalografii, speciálně v metalografii ocelí. (Czech.) František Králík. *Hutnické Listy*, v. 10, no. 5, May 1955, p. 282-288.

Method used to study the structure of fracture surfaces and structural changes during secondary steel hardening. Micrographs. 10 ref.



Kralik, Frantisek

Mechanism of vanadium carbide precipitation. Frantisek Kralik (Lab. Studium Vlastnosti Kovu, CSAV, Prague, Czech.). Hutnicke Listy 11, 280-3 (1956).—In the initial martensitic structure the dispersion hardening together with the formation of the phase V_4C_3 takes place directly in the oversatd. soln.; during the reppin. within bainitic structures a progressive soln. of cementite occurs and the V carbide is formed from ferrite. The time necessary for the formation of V carbide during reppin. is about 10 times that during pptn.

Petr Schneider

KRALIK, F.

Effect of the small content of lead on the hot rolling of Al-Cu-Mgl alloys.

P. 49. (HUTNICKE LISTY.) (Brno, Czechoslavakia) Vol. 13, No. 1, Jan. 1958

SO: Monthly Index of East European Accession (EEAI) LC. Vol. 7, No. 5, May 1958

KRALIK, Frantisek

Preliminary report on the new discovery of the aragonite in the Czechoslovak caverns. Cas mineral geol 8 no.1:85-87 Ja '63.

ACCESSION NR: AP4017926

Z/0065/64/000/001/0013/0027

AUTHOR: Vyklicky, Miloslav (Vy*klitskiy, Miloslav); Kralik, Frantisek (Kralik, Frantishek); Tuma, Hanus (Tuma, Ganush)

TITLE: Distribution of the elements between the alpha and gamma phases in chromium-nickel steels with two-phase structure

SOURCE: Kovove materialy, no. 1, 1964, 13-27

TOPIC TAGS: element distribution, alpha phase, gamma phase, chromium-nickel steel, two-phase structure, manganese

ABSTRACT: The paper studies with a KAMEKA micro-probe the distribution of manganese chromium and nickel in ferrite and austenite in two-phase chromium-nickel steels with a content of about 0.1% C, 21% Cr, 0.5--9.8% Mn, 3.1--6.6% Ni, some of which were further alloyed with about 2% Mo and 0.3% Ti. It was found that the distribution factor in the range of chemical composition studied is approximately constant; about 1.2 for chromium, and 0.9 for manganese. For nickel, this factor depends upon its content in the alloy and varies from 0.55 to 0.65 in the range studied. The heat of solution was found to be about +500 cal/mol for chromium, about -300

Card 1/2

ACCESSION NR: AP4017926

for manganese and from -1,000 to -1,500 for nickel, depending on the nickel content. The data determined for chromium and nickel agreed well with those cited in the literature. The value of -2,040 cal/mol given for manganese in the literature is based on balanced binary Fe—Mn diagrams, where the breakdown of the manganese into alpha and gamma phases is determined indirectly (dilatometrically, metallographically, etc.), and conflicts with all practical experience thus far gained. The paper also shows that in the alloys studied the heat of solution depends on the temperature, which contradicts Zener (Transactions of the Am. Inst. of Mining and Metall. Engineers, 167, 1946) and Jones and Pumphrey (J. Iron and Steel Inst., 163, 1949), who derived the equation for the heat of solution under the assumption that its distribution does not depend either on the temperature or on the concentration of the alloy elements. The authors could not decide from their experiments whether this disagreement was due to the higher concentration of the alloy elements in the specimens or whether that assumption was unjustified. Original has 6 tables, 8 graphs, and 2 equations.

ASSOCIATION: Statni vyzkumny ustav materialu a technologie, Prague (State Experimental Establishment for Material and Technology); Laboratorium fyziky kovov SAV, Bratislava (Laboratory for the Physics of Metals of the SAV)

Card 2/2

L 18820-65 EWT(m)/EPR/EWA(d)/T/EWP(t)/EWP(k)/EWP(b) Pt-4/Pe-4 AS(mp)-2/
IJP(c)/ASD(a)-5 JD/HW
ACCESSION NR: AP5000102 S/0065/64/000/006/0558/0568

AUTHOR: Taborsky, L. (Taborskiy, L.); Kralik, P.; Sebo, P. (Shebo, P.)

TITLE: Study of surface phenomena in aluminum single crystals plastically deformed at high strain rates

SOURCE: Kovove materialy, no. 6, 1964, 558-568

TOPIC TAGS: aluminum single crystal, slip band density, strain rate

ABSTRACT: The dependence of the elongation and the density and width of slip bands on the strain rate (100—5000 sec^{-1}) was determined during explosive loading of aluminum single crystals having orientations of <100>, <112>, and <111>. The density of the slip bands reaches a maximum of 17,000 bands/cm at a strain rate of about 1000 sec^{-1}. The decrease in elongation with increasing strain rate is least marked in single crystals <112>. The slip system (111) <110> is always active. For <112> and <111> orientations only, the uncharacteristic slip system (100) <110> was also observed in the area of high strain rates. With increasing strain rate, the plastic-deformation distribution in the single crystals is more uniform, re-

Card 1/2

L 10820-65
ACCESSION NR: AP5000102

gardless of the orientation. Orig. art. has: 10 figures and 3 tables.

ASSOCIATION: CSAV, Laboratorium fyziky kovov SAV, Bratislava (CSAV, Laboratory of the Physics of Metals, SAV)

SUBMITTED: 11May64 ENCL: 00 SUB CODE: MM, SS

NO REF SOV: 000 OTHER: 009

Card 2/2